

APPENDIX 14

Reasonable Assurance Workgroup Findings and Options

Principals' Staff Committee Meeting
Washington, DC
September 22, 2008

Hello, Neighbor!



Sec. Bryant Motion

- At the direction of the Chesapeake Bay Program Principals' Staff Committee, the chair will appoint a 'Reasonable Assurance' Group who will work to develop recommendations for how the partners will address reasonable assurance within the Bay TMDL. The group will report its recommendations back at the Principals' Staff Committee meeting in September.

Workgroup Composition

- Frank Dawson, Co-Chair, Maryland Department of Natural Resources
- Jeff Corbin, Co-Chair, Virginia Secretary of Natural Resources
- Rich Batiuk, U.S. EPA Chesapeake Bay Program Office
- Jim Curtin, U.S. EPA Office of General Counsel
- Bill Duncanson, Richmond County, Virginia
- Rich Eskin, Maryland Department of the Environment
- Carlton Haywood, Interstate Commission on the Potomac River Basin
- Roy Hoagland, Chesapeake Bay Foundation
- Bob Koronai, U.S. EPA Region 3 Water Protection Division
- Rick Parrish, Southern Environmental Law Institute
- Ann Swanson, Chesapeake Bay Commission
- Bob Yowell, Pennsylvania Department of Environmental Protection

Today's presentation

- Background on Reasonable Assurance
- EPA's Reasonable Assurance expectations for the Bay TMDL
- Options for the Bay Program Partners

PSC Decision Points

- Do you support the reasonable assurance framework?
- Executive Council Action?
 - ✓ Commit to develop a fundamentally different TMDL?
 - ✓ Commitment to fill "gaps"?
 - ✓ Adopt restoration end date and intermediate milestones?
 - ✓ Self-imposed contingencies?
 - ✓ Task PSC and Workgroup to gather additional information and make decisions at a later date?

Background on Reasonable Assurance

➤ Clean Water Act and EPA regulations do not define "reasonable assurance"

- EPA's TMDL regulations at 40 C.F.R. 130.2(i) - Definition of TMDL - EPA states, "If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations [in the TMDL] can be made less stringent."

Background (Cont.)

- EPA guidance (1991) – Does define when reasonable assurance must be demonstrated, but not really what it is:
 - Wasteload allocation for point source(s) is greater than zero; and
 - Nonpoint source pollution reductions necessary to meet load allocations
- Specific Language...
 - "In addition, before approving a TMDL in which some of the load reductions are allocated to nonpoint sources in lieu of additional load reductions allocated to point sources, there must be specific assurances that the nonpoint source reductions will in fact occur."

Broad spectrum of acceptable reasonable assurance demonstrations in 30,000 TMDLs approved by EPA

This Ain't Your Grandpa's TMDL

Welsh Letter to Griffin, 9/11/08

- Unprecedented amount of work in the Bay
- Ever-increasing scientific understanding
- Significant past investments
- Public/Political support for restoration
- Heightened expectations
- "Expectations for the Bay TMDL are not applicable to the TMDL program in general."

Again...

Given that this TMDL is different than most others...are there actions that the PSC or EC should take in regards to, or in tandem with, the development of the TMDL?

Sec. Griffin Letter to J. Capacasa

8/22/08

In order for the CBP and the State partners to fully understand the TMDL and what constitutes "reasonable assurance", we request that EPA address the following questions posed by the Workgroup

1. What jurisdictions will be within the formal TMDL, and which will be outside of the TMDL?
2. What does it mean for jurisdictions to be outside the TMDL? Specifically, what are the requirements of states that are outside of the TMDL?
3. What is EPA's definition of "reasonable assurance", both for TMDLs in general and its specific expectations for "reasonable assurance" provisions in the Bay TMDL?
4. Noting that the PSC has stated for the record that it wants the Bay TMDL to be a model for TMDLs nationwide, what are EPA's expectations for reasonable assurance in the Bay TMDL?
5. What are the ramifications of failing to provide adequate reasonable assurance?

EPA's Position on the Bay TMDL

- Scope: 6 states and District of Columbia in TMDL
- Expectations apply to Bay TMDL, not all TMDLs
- Given past Bay Program efforts, reasonable assurance provisions are on more comprehensive end of spectrum
- Acceleration of Bay restoration does not rely only on TMDL reasonable assurance provisions
 - ✓ Broader "reasonable assurance and implementation framework" with components within and accompanying TMDL

EPA's Position on the Bay TMDL

- 6 components of reasonable assurance and implementation framework:
 1. Revise tributary strategies to identify controls needed to meet TMDL allocations*
 2. Evaluate existing programmatic, funding, and technical capacity to fully implement tributary strategy*
 3. Identify gaps in current programs and local capacity to achieve the needed controls*
 4. Commit to systematically fill gaps/build program capacity – agree to meet specific, iterative, short-term (1-2 year) milestones – demonstrate increased implementation and/or pollutant reductions
 5. Commit to track/monitor/assess progress at set times – adaptive management
 6. Accept contingency requirements if milestones are not met

* Similar to previous tributary strategy efforts

Possible Contingencies

- EPA - Emphasis on fulfilling commitments, but contingencies for failure could include:
 - ✓ redoing TMDL
 - ✓ tighter effluent limits (traditional pt. sources, MS4s, CAFOs)
- EPA 1991 TMDL Guidance

"Where there are not reasonable assurances, under the CWA, the entire load reduction must be assigned to point sources."

Additional "Nuclear" Contingency Options (CBF proposal **NOT** EPA)

- Moratorium on issuance of NPDES permits
- EPA exercises CWA §804 emergency powers – additional regs on pollution
- EPA assumes authority of state water programs
- More stringent state regs on NPS under existing state/fed law (CAFOs, SW, land use, etc.)
- New state regs on NPS (buffer ordinances, ag certification programs, etc.)
- Increase enforcement penalties (construction, wetlands, etc.) put \$ back into implementation
- Increase permit fees (NPDES, wetlands, construction, etc.) put \$ back into implementation

EPA's Position on the Bay TMDL

- Schedule:
 - ✓ Legal deadline under Virginia Consent Decree – May 1, 2011
 - ✓ PSC deadline – December 31, 2010
 - ✓ Revised schedule to meet PSC deadline, but will revert to legal deadline if necessary rather than issue insufficient TMDL
- Scale of allocations within the TMDL:
 - Tidal states (Maryland, Virginia, Delaware) and District of Columbia
 - ✓ Individual WLAs for point sources
 - ✓ Separate LA's by nonpoint source sector, with possible finer scale allocation to counties or sub-basins
 - ✓ Will work with each jurisdiction to set appropriate scale
 - Non-tidal jurisdictions (Pennsylvania, West Virginia, New York)
 - ✓ Gross WLA and LA to major basin in each jurisdiction if supported by tributary strategy with sufficient detail
 - ✓ EPA can assign WLAs to individual point sources if necessary

Options for Bay Program Partners

- Commit to fundamentally different TMDL (Uber-TMDL)
- Commit to delist all impaired segments by 20?? (or nutrient reductions) and set interim milestones to measure progress
- Create regional compact with contingencies for failed commitments (ex. Marine Fisheries Commissions approach)
- Commit to fulfill x% of programmatic, funding, and technical assistance gaps within x years
- Potential contingencies: moratorium on new or expanded permits, apply regulations to nonpoint sources, etc.
- Commit to implementation framework to accompany TMDL
- Defer any actions for 6 months while PSC and Workgroup gather additional information

Proposed PSC/EC Recommendation for Discussion

➤ Adopt EPA's TMDL/Reasonable Assurance Framework

- ✓ All 6 States and DC are "in" the TMDL
- ✓ Differing Scale of Allocations for Tidal vs. Non-Tidal
- ✓ Revise Trib States
- ✓ ID Exceeding Capacity
- ✓ ID Gaps
- ✓ Consult to Gap Filling
- ✓ Develop Short-Term Milestones
- ✓ Track/Monitor/Assess progress at set times
- ✓ Accept Contingency Requirements

➤ Set New Clean-Up Deadline at 2020

- ✓ 2020 deadline based on modeling info
- ✓ More distant deadline based on monitoring info

➤ Set Milestones at 2-Year Intervals

- ✓ Meshes with budget cycles and 303(d) list cycle

➤ Agree to Need for Contingency Requirements

- ✓ Refine specific contingency requirements by 2008 EC
- ✓ Contingency requirements could vary by jurisdiction



**Chesapeake Bay Program Principals' Staff Committee's
Reasonable Assurance Workgroup**

ATTACHMENT B

**Background, Questions and Answers, Initial Suggestions, and
Example TMDLs Addressing Reasonable Assurance**

The Clean Water Act, federal regulations, and EPA guidance and policy do not require Total Maximum Daily Load (TMDL) documents to include implementation plans. However, Agency guidance calls for states and EPA to include reasonable assurance provisions that pollution reductions will occur. Reasonable assurance provisions have been interpreted and applied broadly, and the topic is receiving increased attention as EPA Region 3, states within the Chesapeake Bay watershed, and the District of Columbia prepare for the development of a Bay-wide TMDL. Chesapeake Bay Program partners want and need to know what is required and what provisions might increase the likelihood that wasteload and load allocations are met.

The purpose of this briefing paper is to answer some of the Partners' questions, show the spectrum of language that has been included to date within the reasonable assurance provisions, and provide some preliminary suggestions on what a Bay TMDL could include to ensure that pollution reductions occur. The paper identifies published EPA guidance documents that discuss reasonable assurance, answers frequently asked questions on reasonable assurance, and offers possible suggestions for the Bay TMDL. It also includes an Appendix that summarizes and comments on reasonable assurance discussions in ten EPA-approved and published TMDLs and includes proposals from other organizations on how to strengthen this provision.¹

EPA Guidance on Reasonable Assurance

The following resources define and discuss reasonable assurance.

“Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation.” *Federal Register* 65 (135): 43598-43601,43668. Published July 13, 2000. Accessed at <http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2000_register&docid=f:13jyr5.pdf>.

U.S. Environmental Protection Agency Office of Water (1991). “Development and Implementation of the TMDL.” Chapter 3 in *Guidance for Water Quality-Based*

¹ Four TMDLs from Pennsylvania that were approved on June 30, 2008, are grouped together in Appendix 1 due to similarities in their reasonable assurance provisions.

Decisions: The TMDL Process. EPA 440/4-91-001. April. Accessed at
<<http://www.epa.gov/owow/tmdl/decisions/dec3.html>>.

U.S. Environmental Protection Agency (1997). *New Policies for Establishing and Implementing Total Maximum Daily Loads*. Memorandum from Robert Perciasepe, Assistant Administrator, to Regional Administrators and Regional Water Division Directors, August 8. Accessed at
<<http://www.epa.gov/OWOW/tmdl/ratepace.html>>.

U.S. Environmental Protection Agency (2002). *Guidelines for Reviewing TMDLs Under Existing Regulations Issued in 1992*. Accessed at
<<http://www.epa.gov/owow/tmdl/guidance/final52002.html>>.

U.S. Environmental Protection Agency Office of Water (2008). *Ensuring that TMDLs are Implemented – Reasonable Assurance*. Accessed at
<<http://www.epa.gov/owow/tmdl/ensure.html>>.

U.S. Environmental Protection Agency Office of Water (2008). *Overview of Current Total Maximum Daily Load – TMDL – Programs and Regulations*. Accessed at
<<http://www.epa.gov/owow/tmdl/overviewfs.html>>.

U.S. Environmental Protection Agency (forthcoming). *Handbook for Developing TMDLs on a Watershed Scale*.

[Looking into whether a draft can be shared with partners outside of EPA]

Frequently Asked Questions

Based on federal publications and conversations with Agency staff, this section answers common questions on how reasonable assurance has been applied and interpreted to date.

1. What is “reasonable assurance”?

Answer: **Reasonable assurance** is a required element of a TMDL. However, the Code of Federal Regulations makes no mention of reasonable assurance other than including in the definition of a TMDL:

If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations **practicable**, then wasteload allocations can be made less stringent. Thus, the TMDL process provides for nonpoint source control tradeoffs (40 CFR §130.2(i)).

Reasonable assurance can be read into this definition as the test for determining whether more stringent load allocations are practicable.

EPA’s 1991 TMDL Guidance specifically uses the term **reasonable assurance** to refer to TMDLs that include both a wasteload allocation for point source pollution and a load allocation for nonpoint source pollution. For these TMDLs, states may only increase their wasteload allocations for point sources by attributing a portion

of pollution to load allocations if they can provide a **reasonable assurance** that practices to reduce nonpoint source pollution will be implemented and maintained (Source: <http://www.epa.gov/owow/tmdl/decisions/dec3.html>).

In a 1997 memo on establishing and implementing TMDLs, EPA reiterated the above definition of reasonable assurance for TMDLs with wasteload and load allocations. The Agency added that in 303(d)-listed watersheds impaired primarily or solely by nonpoint sources, states should submit plans to EPA describing how they will implement NPS reductions and achieve load allocations. At a minimum, these plans should include a **reasonable assurance** that load allocations will be achieved. Reasonable assurance may include regulatory, non-regulatory, and incentive-based measures, consistent with applicable laws and programs. However, EPA cannot disapprove a TMDL for a water body impaired *solely* by nonpoint sources that lacks reasonable assurance provisions because currently there is no federal regulation for NPS discharges. In effect, NPDES permits provide the regulatory hammer that leverages reasonable assurance from nonpoint sources, and reasonable assurance provisions are not necessary where this hammer does not exist (Sources: <http://www.epa.gov/owow/tmdl/ensure.html>, <http://www.epa.gov/OWOW/tmdl/ratepace.html>, <http://www.epa.gov/owow/tmdl/guidance/final52002.html>).

Finally, EPA published a final rule revising its regulatory requirements to develop TMDLs in 2000. Although the rule was later withdrawn, it demonstrates the Agency's views on reasonable assurance. The rule defined reasonable assurance as, "A demonstration that TMDLs will be implemented through regulatory or voluntary actions, by Federal, State or local governments, authorized Tribes or individuals" (65 FR 43598). For point sources requiring NPDES permits, reasonable assurance means that "States, Territories, and authorized Tribes must identify procedures that will ensure that permits will be modified, issued or reissued as expeditiously as practicable to incorporate effluent limits consistent with wasteload allocations" (65 FR 43598). For new sources, facilities cannot discharge until they obtain permits consistent with TMDL wasteload allocations. For permitted facilities, the permitting authority will reissue permits consistent with wasteload allocations as soon as possible after the permit expires (65 FR 43598). For sources not requiring NPDES permits (eg, nonpoint sources), reasonable assurance means that the actions or management measures implementing load allocations must "1) be specific to the pollutant and waterbody for which the TMDL is being established, 2) implemented as expeditiously as practicable, 3) accomplished through reliable delivery mechanisms, and 4) supported by adequate funding" (65 FR 43599).

2. Are states, nonpoint sources, or point sources liable if load allocations are not met despite reasonable assurance provisions?

Answer: EPA's Office of Water holds that reasonable assurance provisions are only valid if they include legal or financial consequences in the event that load

allocations are not met. At the national level, however, EPA does not address the question of who is responsible for achieving these reductions and who bears the consequences for unmet load allocations. Instead, liability and consequences are determined on a case-by-case basis. For example, if a point source facility enters into a contract with a nonpoint source and pays it to reduce its nonpoint source discharges in order to comply with the facility's NPDES permit, the facility will likely assume liability for the nonpoint source pollution reductions and receive penalties for any excess pollution discharged by the nonpoint source.² Alternatively and less stringent for individual point sources, the state could revisit all NPDES permits in an impaired watershed when they expire and further limit discharges if nonpoint sources exceed their load allocation.

Although EPA's Office of Water would like consequences for unmet load allocations, reasonable assurance falls short of absolute certainty that load allocations will be achieved. This accepted uncertainty can make it difficult to assign liability for discharges that exceed TMDL allocations.

3. Does reasonable assurance apply exclusively to ensuring that pollution from nonpoint sources meet TMDL load allocations, or does it also refer to assurances from point sources?

Answer: Reasonable assurance most often applies to nonpoint source pollution reductions. The Clean Water Act requires that point sources with NPDES-permitted discharges comply with TMDL wasteload allocation limits, so in essence the NPDES permits fulfill reasonable assurance requirements for point sources (<http://www.epa.gov/owow/tmdl/guidance/final52002.html>). Given that there is no equivalent federal regulatory driver for nonpoint sources of pollution, TMDLs must include some other form of reasonable assurance that load allocations will be met if wasteload allocations are less stringent due to load allocations that assume "practicable" reductions in nonpoint source pollution.

4. What types of activities can reasonable assurance entail?

Answer: Reasonable assurance provisions may apply to TMDL implementation activities conducted by state and local governments, individual landowners, and public or private enterprises engaged in agriculture, forestry, or urban development. Reasonable assurance may include the application or utilization of local ordinances, grant conditions, development and implementation of nonpoint source control plans (also known as 319 nonpoint source management plans), and other enforcement authorities. States authorized to administer NPDES programs may also designate nonpoint sources to be point sources and require them to obtain NPDES permits (Sources: <http://www.epa.gov/owow/tmdl/overviewfs.html>, <http://www.epa.gov/owow/tmdl/decisions/dec3.html>, <http://www.epa.gov/owow/tmdl/ensure.html>).

² Although less commonly, the nonpoint source could assume liability for reducing discharges. Either way, the contract between the two parties specifies liability and consequences for noncompliance.

5. What type of documentation is necessary to substantiate reasonable assurance provisions?

Answer: There are no specific, nationwide requirements to substantiate reasonable assurance. EPA holds that reasonable assurance is a flexible concept that should be adaptable to varied conditions in impaired watersheds.

6. Have TMDL provisions for reasonable assurance provisions been litigated?

Answer: To date, reasonable assurance provisions within TMDLs have not been challenged in court for being either too stringent or not stringent enough. Therefore, no ceiling exists on the specificity, detail, or substance of reasonable assurance provisions.

Potential Suggestions for Addressing Reasonable Assurance in the Bay TMDL

Over the years, reasonable assurance provisions have ranged from non-existent to detailed discussions of existing and proposed programs; local, state, and national regulations; expected outcomes; implementation schedules; and financial resources. Appendix 1 provides numerous examples of reasonable assurance provisions from EPA-approved and published TMDLs and proposals from other organizations on how to strengthen these provisions. This section highlights specific components that could be incorporated into a Bay-wide TMDL to strengthen the reasonable assurance section and increase the likelihood that dischargers meet load and wasteload allocations. These suggestions are only preliminary and are intended for further discussion by the Workgroup. They are:

1. Require intermediate and final benchmarks for reducing nonpoint source pollution and a schedule for attaining these benchmarks.
2. Set dates for measuring progress toward meeting load and wasteload allocations. If nonpoint sources are behind schedule to meet load allocations, make wasteload allocations more stringent and revise NPDES permits accordingly.
3. Implement grant priority ranking system to target grant dollars toward efforts that will help meet load allocations.
4. Require implementation tracking system to monitor pollution reduction projects, coordinate across programs, agencies, and organizations, and detect changes in water quality.
5. Notify certain categories of nonpoint source polluters that they will be treated like point sources and required to obtain NPDES permits if they do not demonstrate marked voluntary reductions in discharges.

6. Estimate the costs of meeting load allocations in order to determine whether existing program and grant funding are sufficient to finance nonpoint source pollution reductions.
7. Establish sources to fund best management practices that also send price signals to nonpoint source polluters (e.g., nitrogen tax on fertilizer sales).

Appendix 1

Examples of Reasonable Assurance: Best Practices from EPA-Approved and Published TMDLs and Suggestions from Other Sources

Published TMDLs

Anacostia River Basin Watershed TMDL for Sediment/Total Suspended Solids

Decision Rationale published July 24, 2007

Accessed at <http://www.epa.gov/reg3wapd/tmdl/anacostia_tss/decision_rationale.pdf>.

Reasonable Assurance and Implementation discussion in Decision Rationale: pp34-36.

The reasonable assurance and implementation sections of this TMDL are typical of other multi-jurisdictional TMDLs in that they start with a discussion of general implementation approaches and then describe the implementation and reasonable assurance provisions unique to each jurisdiction.

The TMDL states that NPDES permits will be used to ensure that point sources, including MS4 NPDES permits, limit discharges consistent with the wasteload allocation.

EPA Region 3 finds that the TMDL contains adequate reasonable assurance that load allocations can be implemented. The TMDL suggests that nonpoint source pollution reductions will be achieved by implementing voluntary BMPs, most notably riparian buffers in forested and agricultural areas and development of soil conservation plans in agricultural areas. The reasonable assurance section also mentions the District of Columbia's regulatory oversight over land-disturbing activities, stormwater management, and floodplain management. EPA assumes that the District will approve plans in a way that will minimize runoff.

EPA assumes that the District and Maryland will use Section 319 funds, Maryland's Agriculture Cost Share Program, and USDA's Environmental Quality and Incentives Program to fund BMPs.

Comments: Overall, the reasonable assurance discussion is relatively basic. It does not provide a schedule for meeting reduction goals or include consequences for Maryland, the District, landowners, or point sources if load allocations are not met.

Anacostia River Basin Watershed TMDL for Biochemical Oxygen Demand and Nutrients

Decision Rationale published June 5, 2008

Accessed at

<http://www.epa.gov/reg3wapd/tmdl/Anacostia_BOD/AnacostiaBOD_DR.pdf>.

Reasonable Assurance and Implementation discussion in Decision Rationale: pp32-34.

The reasonable assurance and implementation discussions are very similar to the discussions in the Anacostia Sediment/TSS TMDL. The TMDL states that NPDES permits, including MS4 NPDES permits, will be used to ensure that point sources limit discharges consistent with the wasteload allocation.

EPA Region 3 finds adequate reasonable assurance that load allocations will be met. Like the other Anacostia TMDL, it mentions the District's and Maryland's nonpoint source control plans and funds as assurance that implementation will occur. However, it provided somewhat more detail than the Sediments TMDL, including:

- Maryland's Water Quality Improvement Act of 1998 , which requires the development, implementation, and enforcement of nutrient management plans. However, the discussion does not mention whether these plans had been developed or implemented on schedule or if they were enforced;
- Maryland Department of Environment's Integrated Project Priority System that targets nonpoint source control grants and loans to priority watersheds, noting that the Anacostia is one such priority watershed; and
- Additional monitoring sites in the watershed to track progress.

The discussion also mentions plans to develop stormwater and low impact retrofits, restoration activities, and other voluntary best management practices to help meet load allocations.

Comments: The reasonable assurance discussion is somewhat more detailed for the BOD/Nutrients TMDL than the Sediments/TSS TMDL. It includes more detail on regulations, targeting of grant dollars for priority projects, and monitoring progress. However, the Decision Rationale still does not make any mention of a schedule for meeting reduction goals or include consequences for Maryland, the District, landowners, or point sources if load allocations are not met.

Tidal Potomac River TMDL for PCBs

Decision Rationale published October 31, 2007

Accessed at

<http://www.potomacriver.org/cms/riverhealthdocs/tidal_potomac_pcb_tmdl/TidalPotomac_PCB_TMDL_10-31-07.pdf>.

Due to uncertainty regarding loading capacity and the allocation scheme, the TMDL adopts an adaptive implementation strategy that relies on implementing reduction activities concurrent with additional data collection. The data can then be used to modify future reduction efforts. Jurisdictions will require additional data collection from select sources in order to determine BMP effectiveness. The TMDL sets priorities for gathering additional data.

Similar to other TMDLs, the Tidal Potomac PCB TMDL lists programs underway and available funding that should reduce nonpoint source pollution and help meet load allocations. The TMDL identifies BMPs that should reduce pollutant loads and existing programs that are working with landowners and other partners to implement these BMPs. However, the jurisdiction-specific implementation plans and reasonable assurance provisions still do not quantify the reductions that these programs should achieve and lack schedules for when programs will achieve specific, measurable nonpoint source reduction benchmarks. The TMDL does note state regulatory programs that are designed to manage stormwater and control sediment and erosion.

Comments: The reasonable assurance and implementation discussion highlights strategies to achieve reductions while gathering more information that can improve future reduction efforts. The identification of jurisdiction-specific programs is helpful, but the provisions still lack specific reduction benchmarks by program, schedules for achieving benchmarks, or consequences if the load allocation is not met.

Paxton Creek Watershed Nutrient and Sediment TMDL, Goose Creek Watershed Nutrient TMDL, Sawmill Run Nutrient TMDL, Southampton Creek Watershed Nutrient and Sediment TMDL

Decision Rationales published June 30, 2008

Accessed at <http://www.epa.gov/reg3wapd/tmdl/pa_tmdl/NutrientEndPoint/index.html>

These recent TMDLs in Pennsylvania are grouped together because of the similarity in their reasonable assurance provisions.

Like other TMDLs in this section, the Paxton, Goose, and Southampton Creek TMDLs state that they will achieve wasteload allocations by making NPDES permits consistent with allocations. The Goose Creek and Southampton Creek TMDLs include an “adaptive implementation strategy” for NPDES permits issued to point sources. The strategy described types of dischargers and provided a schedule for phasing in nutrient limits. The Sawmill Run TMDL makes no mention of wasteload allocations and NPDES permits in its reasonable assurance provision.

The reasonable assurance provisions for meeting load allocations in the four Pennsylvania TMDLs include identification of BMPs that should reduce pollutant loads and grant programs that could fund BMP implementation. The Southampton Creek TMDL has an Appendix that describes BMPs in greater detail, including their effectiveness and cost. None of the TMDLs mention how the state could target grant dollars to achieve load allocations or a schedule for when nonpoint source pollution reductions should occur.

Comment: The reasonable assurance provisions for load allocations under these TMDLs seem weaker than other TMDLs discussed in this section. The TMDLs identify BMPs that, if implemented, would help reduce nutrient and sediment loads. However, they do not link these BMPs to many existing or future programs that would help get them

implemented other than the nonpoint source control program and some other grant programs that could help fund BMPs. The only reference that the provisions make to the timing of meeting load allocation requirements is that BMP implementation “should **eventually** achieve the loading reduction goals established in these TMDLs” (p. 8-3 of Paxton Creek TMDL Report, 4-3 of the Goose Creek TMDL Report, 6-3 of the Sawmill Run TMDL Report; emphasis added).

Long Island Sound Nutrients TMDL

Decision Rationale published April 4, 2001

Accessed at <<http://www.epa.gov/region1/eco/tmdl/assets/pdfs/ct/longislandsound.pdf>>

The TMDL calls for improvements to sewage treatment plants to account for 90 percent of nutrient reductions, and nonpoint sources only have to reduce their loads by 10 percent to meet the TMDL’s load allocation. As with other TMDLs, NPDES permits consistent with the wasteload allocation provide reasonable assurance that the point sources will make the necessary reductions. Connecticut and New York state that they will achieve their load allocations by reducing nutrient pollution from agricultural and urban nonpoint sources by 20 percent at 50 percent of sites. The states provide reasonable assurance that the load allocation will be met by including these targets in their Clean Water Act Section 319 Nonpoint Source Management Programs and Coastal Zone Act Reauthorization Amendments (CZARA) Section 6217 Coastal Nonpoint Pollution Control Programs. These programs underwent significant review and revision between 1999 and 2000, shortly before the Long Island Sound TMDL was finalized, and include a schedule for achieving nonpoint source nutrient reductions. The TMDL also includes a reassessment schedule to evaluate whether load and wasteload allocations are sufficiently protective to achieve water quality standards for the Sound.

Comment: Although the Long Island Sound TMDL relies largely on the implementation of nutrient management plans and BMPs to achieve its load allocation, reasonable assurance provisions appear to have more teeth than other TMDLs in this section. The TMDL references specific changes to the nonpoint source control programs responsible for assisting in BMP implementation, and the TMDL provides a schedule for achieving nonpoint source pollution reductions. Finally, the TMDL sets a date for evaluating whether allocations are sufficient to achieve water quality goals. In short, specific changes to programs, timeframes, and evaluation set these reasonable assurance provisions apart from other TMDLs.

Northeast Regional Mercury TMDL

Decision Rationale expected December 20, 2008

Accessed at <<http://www.epa.gov/region1/eco/tmdl/assets/pdfs/ne/Northeast-Regional-Mercury-TMDL.pdf>>

The Northeast Regional Mercury TMDL is unique in that it was developed by seven state agencies and the New England Interstate Water Pollution Control Commission (NEIWPCC). Unlike other TMDLs included in this section, almost all of the pollution is

attributable to nonpoint sources, many of which originate outside the study area. Therefore, the TMDL calls for a combination of provisions at the state, national, and international level to reasonably assure that the load allocation will be met. Measures include regulations and best management practices. Because the states contributing to the TMDL cannot control all of these actions, they call on EPA and other bodies to ensure that load allocations are met.

The TMDL describes efforts that have already been made at the state level to curb mercury pollution. First, municipal waste combustors and medical waste incinerators in the seven states have emissions limits that are three- and ten-times more stringent than EPA requirements, respectively. The states also restrict the manufacture, sale, and/or distribution of an increasing number of mercury-containing products. In addition to laws that have been adopted throughout the seven-state area, individual states have adopted more stringent regulations to limit circulation of the metal. In many cases, other jurisdictions have followed suit and adopted these measures.

The TMDL also highlights that state actions alone will not meet the load allocations and calls on EPA to adopt more stringent policies nationwide. It also notes efforts carried out by the United Nations Environmental Program to decrease mercury use, waste, and emissions.

The TMDL outlines an adaptive management approach to implementing reductions and assuring that goals are met. It requires monitoring and revising reduction targets if interim goals are not met.

Comment: Due to the highly toxic, acute, and bioaccumulative nature of mercury, this TMDL has some major differences from the upcoming Bay TMDL that will focus on nutrient and sediment impairment. Nevertheless, some attributes of the interstate mercury TMDL could become examples for the Bay TMDL. The TMDL provides far more details than other TMDLs in this section on the state and regional laws that have been passed to reduce mercury supply and demand. Regional regulations could be a model for the Bay watershed states. The reasonable assurance section's emphasis and level of detail on regulations implemented in individual states, as well as estimates of decreases resulting from these rules, both quantifies the progress made to date and suggests additional reductions that could occur if other states in the region adopt similar measures.

North Coast Subbasins TMDL

Decision Rationale expected August 20, 2003

Accessed at

<<http://www.dcq.state.or.us/wq/TMDLs/docs/northcoastbasin/northcoast/tmdl.pdf>>

The North Coast Subbasins TMDL encompasses four subbasins in northwestern Oregon and includes temperature, bacteria, dissolved oxygen, biocriteria, and aquatic weeds or algae. Like many other TMDLs throughout the U.S., the it states that revisions to

NPDES permits provide reasonable assurance that point sources will meet wasteload allocations as required by federal and state law. In addition, Oregon requires Water Pollution Control Facilities (WPCF) permits for onsite land disposal. These permits will also be revised for consistency with the TMDL's wasteload allocation and provide additional assurance that point source pollution reductions will be achieved. The North Coast Subbasins goes a step beyond many other TMDL reasonable assurance provisions for point sources by specifying a timeframe by which permits should be revised (one-year after TMDL approval). This deadline does not include the compliance window in which dischargers can upgrade to comply with permit requirements.

The TMDL includes reasonable assurance provisions for nonpoint source pollution from forested, agricultural, urban, and rural lands. Designated management agencies within the state will develop or revise water quality management plans that specify management practices to reduce pollutant loads, timelines for implementing these practices and attaining load allocations, identification of parties responsible for implementing measures, monitoring protocols, funding for implementation measures, and citation of legal authority under which implementation will be conducted. Failure to comply with these guidelines may result in enforcement actions.

The TMDL does not rely only on voluntary best management practices to achieve load allocations. Rather, it specifies state laws and programs requiring forest operators to comply with water quality protection rules and specifies penalties for violators. The TMDL refers to an MOU between the Oregon Department of Forestry and Department of Environmental Quality stating that they will work together to evaluate whether Forest Protection Act measures on private forest lands are sufficient to meet load allocations. It also discusses even more stringent management practices for activities within state and federal forests.

Oregon also has more stringent oversight of agricultural practices than many other states. State law requires the Oregon Department of Agriculture to develop agricultural water quality management plans and enforce rules in watersheds violating water quality standards. The TMDL references an MOA between the Departments of Agriculture and Environmental Quality to ensure that these plans are sufficient to meet load allocations. The state also expects cities and counties to adopt ordinances that will improve water quality through their land use planning processes, but the TMDL does not specify consequences for cities and counties that do not adjust their planning practices. Finally, the TMDL references actions within the Oregon Plan for Salmon and Watersheds, a statewide plan with the purpose of improving aquatic resources and protecting endangered species, and the Comprehensive Conservation and Management Plan for the Columbia River Estuary Partnership that will help meet load and wasteload allocations.

Comment: The North Coast Subbasins TMDL provides examples of how a state can weave together statewide plans, laws, regulations, and programs to provide reasonable assurance that wasteload and load allocations are met. It gives examples of how to require nonpoint source pollution reductions through schedules, deadlines, oversight, and enforcement. Finally, the TMDL emphasizes the need for local participation and

adaptive management to ensure that policies adjust to changing conditions and new information. The reasonable assurance section lacks a quantitative discussion of these provisions, however.

Suggestions from Other Sources

Chesapeake Bay Foundation's Suggestions (Letter to Chesapeake Bay Program Principals' Staff Committee, June 13, 2008):

Reasonable assurance applies to reductions from both point and nonpoint sources and must include:

- Identification of sufficient funds to implement NPS pollution reductions;
- Identification of state laws, regulations, implementation policies, and guidance that leverage and require pollutant reductions;
- Local pollution caps so that local governments have pollution reduction targets to frame implementation efforts;
- Incorporation of all, not just some, wastewater treatment and municipal stormwater discharges into wasteload allocation;
- Requirements to reopen all NPDES permits, as well as any other permit included as part of reasonable assurance provisions, and require new pollution discharge limits consistent with the TMDL; and
- Setting schedules and deadlines for meeting NPS pollution reduction requirements and reporting schedules for monitoring reductions.

Cadmus Group (2008). *Total Maximum Daily Load (TMDL) Implementation Tracking Needs Assessment: Current Status and Future Needs for States in Regions 5, 6, and 10.* Prepared for U.S. Environmental Protection Agency. March 2008.

This assessment identifies tracking systems as a primary need for states to monitor implementation of TMDLs, coordinate with other programs (eg, 319 and Farm Bill programs), and hopefully monitor changes in water quality. Currently such systems are lacking in many states. Although the report does not mention reasonable assurance specifically, tracking systems could be one provision that leads to better identification of measures that will be taken and progress that has been made across jurisdictions.

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